

## ABSTRACT OF THE DISCLOSURE

The present invention relates generally to an apparatus for bi-directional communications of voice, data, and alarms, and simultaneous transmission of video signals over a single cable such as coax. In more particular, it applies to a communications system that utilizes coax-type cabling to offer computer related in-room guest services such as on-television screen display of their bills, etc. The instant invention utilizes a digital communications protocol, preferably PCM, to fit a plurality of general purpose communications channels within conventional broadcast television frequencies. These communication channels might variously be used to carry telephone voice data, thereby obviating the need for a separate phone network, or, more generally, they might be used to transport any sort of digital data (e.g., room billing information, outgoing faxes, etc.) The instant invention also provides a means for directing broadcast video information to specific rooms within the structure. Finally, the instant invention also accommodates the remote generation of signals / alarms and their detection and processing in a central facility.